



Changes in Nutritive Values of Grazing Grass at Annual Ryegrass-Brachiariagrass Rotation Pasture in South-West Japan.



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Objects and backgrounds

In south-west Japan,

- Reproductive cattle grazing is an important industry.
- Nevertheless, grazing of fattening cattle is very rare and fattening in barns using imported grain is common.
- Fattening on pasture must be considered to mitigate the use of imported grain and to use abandoned farmland.

For year-around grazing, we need both

- Winter grass (ex. Italian ryegrass)
- Summer grass (ex. Brachiariagrass)

We demonstrated the fattening on pasture.

In this study, we describes nutritive values of grass intake by grazing steers.



Materials and methods

Grazing field : NARO Kyushu Okinawa Research Centre, Kumamoto, Japan (32° 53'N, 130° 44'E, 78 m a.s.l.).

Grazing steers : Japanese Black and Japanese Brown.

Periods : From 8/3/2011 to 3/17/2014 (3 seasons each grasses.)

Measurement : Every time when steers change paddocks, we collect grass samples above 5 cm from ground level.

Results and Discussion

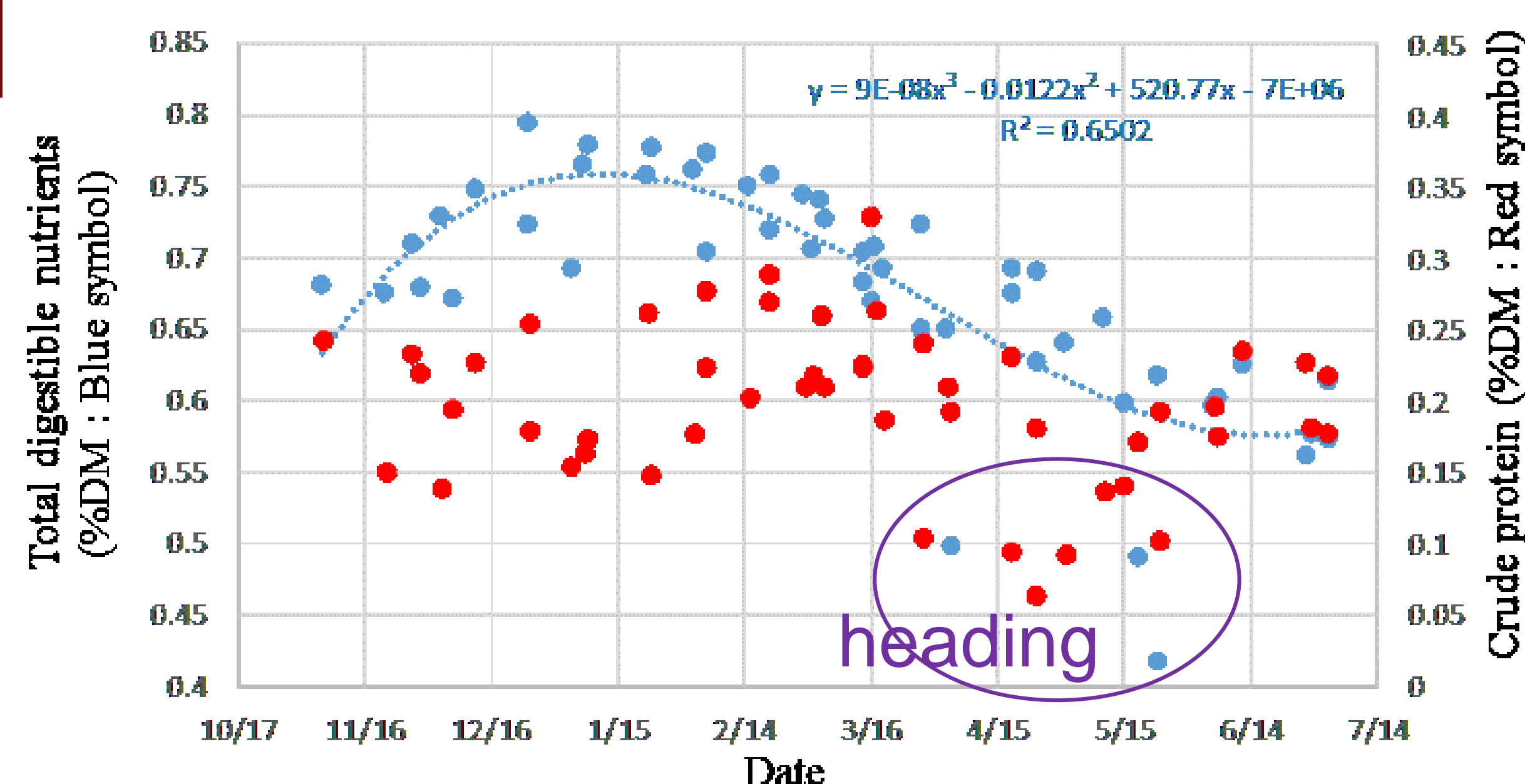


Figure 1. Changes in nutritive values of Italian ryegrass.

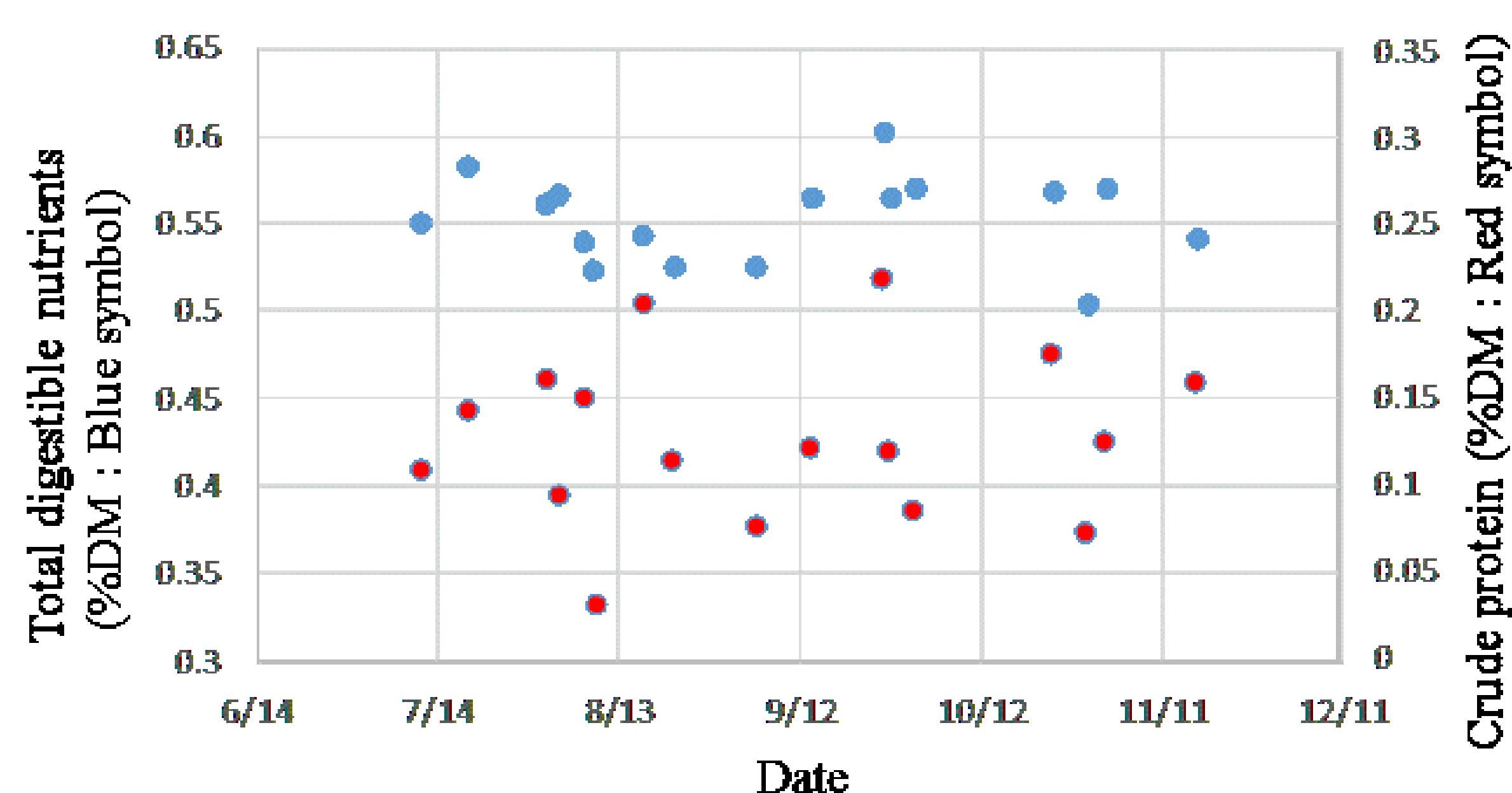


Figure 2. Changes in nutritive values of Brachiariagrass.

Of Italian ryegrass,

- TDN showed seasonal changes. increased from fall (around 65% dry matter(DM)) through January (over 75%DM), then declined until summer (around 60%DM).
- CP showed unseasonal wide range changes. The range is 7 - 33%DM.
- TDN and CP decreased markedly when Italian ryegrass showed heading



Of Brachiariagrass,

- Seasonal change in TDN are not clear. The range is 50 - 60%DM.
- CP showed unseasonal wide range changes. The range is 3 - 22%DM.

Differences in nutritive values between adjacent periods depend on paddock differences. We didn't adjust the fertilizer rate among paddocks with different grass growth rates. The unstable nutritive values of pasture grass makes the weight gain of steer unstable.

To reduce differences in nutritive values, especially CP between paddocks, it is necessary to clarify the optimum fertilizer rate dependence on growth in the respective paddocks.